

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-3 (Canceled)

Claim 4 (Currently amended): An information-processing device that performs tunnel communications:

a tunnel communication part including a network interface for communicating with a server via a communication line of a communication network, wherein the tunnel communication part acquires an identifier and an IP address of a communication destination device from the server and then performs the tunnel communications over the communication network with encapsulated communication target data;

a judgment part for determining whether the information-processing device is to be a source of the tunnel communication or a destination of the tunnel communication in each of the tunnel communications; and

an address determination part including a computer-readable memory storing a relationship table comprising a plurality of addresses for a caller and a plurality of other addresses for a callee separately and that returns a caller address from among

the plurality of addresses to be included in the encapsulated communication target data when the information-processing device is identified as being the source by the judgment part and a callee address from among the plurality of addresses to be included in the encapsulated communication target data when the information-processing device is identified as being the destination by the judgment part, wherein the caller address is different than the callee address and wherein the address determination part selects the caller address for the information-processing device when the information-processing device is the source and the callee address for the information-processing device when the information-processing device is the destination to be included in the communication target data according to the relationship based at least in part on the determination by the judgment part.

Claims 5-7 (Canceled)

Claim 8 (Previously presented): The information-processing device for a communication source that performs tunnel communication with a communication destination device as claimed in claim 4, further comprising:

a tunnel communication identifier acceptor for accepting a

tunnel communication identifier for identifying the tunnel
communication; wherein

the address determination part determines at least one of
the caller address and the callee address used for the
communication target data, according to the determination by the
judgment part and the tunnel communication identifier.

Claim 9 (Previously presented): The information-
processing device as claimed in claim 8, wherein the address
determination part determines a part of the at least one of the
caller address and the callee address used for the communication
target data according to the tunnel communication identifier,
and determines another part of the at least one of the caller
address and the callee address used for the communication target
data according to the determination by the judgment part.

Claim 10 (Canceled)

Claim 11 (Previously presented): The information-
processing device as claimed in claim 8, wherein the tunnel
communication part performs two or more tunnel communications
with two or more destination communication devices, further
comprising:

a detection part for detecting whether two or more addresses used for the communication target data are the same in the two or more tunnel communications; and

an address changing part for changing at least one of the addresses used for the communication target data if the detection part detects that two or more addresses are the same.

Claim 12 (Previously presented): The information-processing device as claimed in claim 8, further comprising:

an address change information receiver for receiving address change information including information related to an address change; and

an address changing part for changing at least one of the caller address and the callee address used for the communication target data, according to the address change information.

Claim 13 (Previously presented): The information-processing device as claimed in claim 8, wherein the tunnel communication part performs two or more tunnel communications with two or more devices for a communication destination or destinations, further comprising:

a detection part for detecting whether two or more addresses that are included in the communication target data are

the same in the two or more tunnel communications;

an address agreement information transmitter for transmitting address agreement information showing that the two or more addresses are the same if the detection part detects that two or more addresses are the same;

an address change information receiver for receiving address change information including information related to an address change; and

an address changing part for changing at least one of the two or more addresses included in the communication target data according to the address change information.

Claim 14 (Previously presented): The information-processing device as claimed in claim 8, further comprising an address output part for outputting the at least one of the caller address and the callee address determined by the address determination part.

Claim 15 (Previously presented): The information-processing device as claimed in claim 14, wherein the address output part transmits the at least one of the caller address and the callee address determined by the address determination part.

Claim 16 (Previously presented): A communication system comprising:

an information-processing device as claimed in claim 8;
the communication destination device; and
a server that performs a process for establishing tunnel communication performed between the information-processing device and the communication destination device.

Claims 17-19 (Canceled)

Claim 20 (Currently amended): A server comprising:
a network interface for communicating with a plurality of information-processing devices over a communication network;
a judgment part for determining, for each tunnel communication between a first information-processing device and a second information-processing device, which of the first information-processing device and the second information-processing device is to be a source of the tunnel communication and which is a destination of the tunnel communication, wherein the judgment part designates the source of the tunnel communication to be a caller and designates the destination of the tunnel communication to be a callee;
an address determination part including a computer-readable

memory storing a ~~relationship~~ table comprising a plurality of addresses available to be assigned to a caller and a plurality of other addresses available to be assigned to a callee separately, wherein ~~between~~ the address determination part selects a caller address from among the plurality of addresses to be assigned to the caller and a callee address from among the plurality of addresses to be assigned to the callee for each tunnel communication, wherein both the caller address and the callee address are to be included in encapsulated communication target data in the tunnel communication performed between the first information-processing device and the second information-processing device according to a determination by the judgment part, and wherein at least one of the callee address and the caller address can be assigned by the address determination part to a different information-processing device participating in different tunnel communications; and

an address output part operatively coupled to receive the caller address and callee address from the address determination part, wherein the address output part outputs the caller address and the callee address determined by the address determination part.

Claims 21-23 (Canceled)

Claim 24 (Previously presented): The server as claimed in claim 20 further comprising:

a tunnel communication identifier acceptor for accepting a tunnel communication identifier for identifying the tunnel communication performed between the first information-processing device and the second information-processing device; wherein

the address determination part determines the caller address of the caller and the callee address of the callee, both addresses used for encapsulated communication target data in the tunnel communication performed between the first information-processing device and the second information-processing device according to the determination by the judgment part and according to a tunnel communication identifier accepted by the tunnel communication identifier acceptor.

Claim 25 (Previously presented): The server as claimed in claim 24, wherein the address determination part determines a part of at least one of the caller address and the callee address used for the communication target data according to the tunnel communication identifier, and determines another part of the at least one of the caller address and the callee address used for the communication target data according to a

determination by the judgment part.

Claim 26 (Canceled)

Claim 27 (Previously presented): The server as claimed in claim 20, wherein the address output part transmits both the caller address and the callee address to each of the first information-processing device and the second information-processing device.

Claim 28 (Previously presented): A communication system comprising:

a server as claimed in claim 20;

a first information-processing device that performs tunnel communication using the caller address for the communication target data; and

a second information-processing device that performs tunnel communication with the first information-processing device using the callee address for the communication target data.

Claims 29-31 (Canceled)

Claim 32 (Currently amended): A method of facilitating

a plurality of different tunnel communications between information-processing devices over a plurality of different types of communication networks, the method comprising:

~~defining a relationship~~ accessing a table provided to at least one of the information-processing devices, the table comprising a plurality of addresses ~~between at least one of~~ from which a caller address to be used for is to be selected and assigned to a caller in each tunnel communication and a plurality of addresses from which a callee address to be used for is to be separately selected and assigned to a callee in each tunnel communication, wherein at least one of the caller address and the callee address is to be used for different information-processing devices involved in a plurality of different tunnel communications;

determining which of a first information-processing device and a second information-processing device performing a first tunnel communication is a source of each tunnel communication that is to be designated as the caller and which is a destination of each tunnel communication that is to be designated as the callee;

selecting, using said relationship and a result of said determining, at least one of the caller address and the callee address to be included in encapsulated communication target data

to be transmitted during the first tunnel communication performed between the first information-processing device and the second information-processing device;

encapsulating the at least one of the caller address and the callee address with another network address into the encapsulated communication target data, wherein the at least one of the caller address and the callee address and the another network address correspond to the plurality of different types of communication networks; and

transmitting the encapsulated communication target data over the plurality of different types of communication networks to at least one of the caller address and the callee address included in the encapsulated communication target data.

Claims 33-35 (Canceled)

Claim 36 (Previously presented): The method of determining an address as claimed in claim 32, wherein the at least one of the caller address and the callee address is selected to be included in the encapsulated communication target data as a function of a tunnel communication identifier in combination with said relationship and the result of said determining.

Claim 37 (Previously presented): The method of determining an address as claimed in claim 36, further comprising accepting the tunnel communication identifier from a portable computer-readable medium, wherein the step of determining an address determines the address using the tunnel communication identifier accepted in the step of accepting a tunnel communication identifier.

Claim 38-53 (Canceled)

Claim 54 (Previously presented): The information-processing device of claim 4, wherein the relationship includes a function that determines at least one of the caller address and the callee address as a function of a variable established by the signal from the judgment part.

Claims 55-57 (Canceled)

Claim 58 (Previously presented): The method of claim 36, wherein the function of the tunnel communication identifier includes a comparison of a least significant digit of a communication destination device identifier to a least

Appl. No. 10/597,496
Amdt. Dated November 19, 2010
Reply to Office action of August 20, 2010

PATENT AF
RESPONSE UNDER 37 C.F.R. §1.116
EXPEDITED PROCEDURE
ART UNIT: 2444

significant digit of a communication source device identifier.